

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

**UNITED STATES PATENT AND TRADEMARK OFFICE**

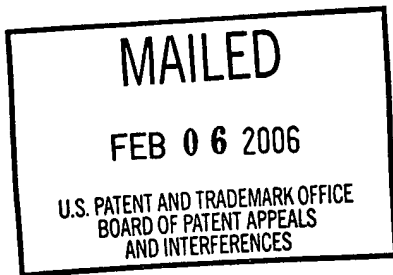
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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Ex parte KOJI MAEDA, YUICHI MEGURIYA, HIDENOBU KAMEDA, HITOSHI  
TAKENAKA and HIROYUKI YOSHIDA

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Appeal No. 2005-2736  
Application No. 09/966,288

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HEARD: JANUARY 12, 2006

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Before McQUADE, CRAWFORD, and BAHR, Administrative Patent Judges.  
CRAWFORD, Administrative Patent Judge.

**DECISION ON APPEAL**

This is a decision on appeal from the examiner's final rejection of claims 1, 7 and 39 to 42. Claims 2 to 6 and 8 to 37 have been withdrawn from consideration. Claim 38 has been canceled.

The appellants' invention relates to a heat exchanger which includes a fuel supply plate and avoiding portions which prevent liquid fuel drops from being mixed with each other when the fuel is flown out (specification, pages 13 to 14). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

#### THE PRIOR ART

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Johnson	1,639,091	Aug. 16, 1927
Tsubouchi et al. (Tsubouchi)	6,494,169	Dec. 17, 2002

#### THE REJECTION

Claims 1, 7, and 39 to 42 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tsubouchi.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (mailed June 14, 2004) for the examiner's complete reasoning in support of the rejections, and to the brief (filed February 26, 2004) and reply brief (filed August 13, 2004) for the appellants' arguments thereagainst.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The examiner has rejected the claims under 35 U.S.C. § 102(b) as being anticipated by Tsubouchi. We initially note that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference.

The examiner finds that Tsubouchi describes the invention as claimed. In regard to the recitation in claims 39 and 40 of an avoiding means and avoiding portions respectively, the examiner states:

. . . By definition, nozzles comprise divergent cross sections at the outlet side thereof. The nozzles 41-45 in fuel supply plate changer 3, inherently each having a divergent cross section is read as "avoiding means" or "avoiding portions" [answer at page 3].

The examiner cites Johnson as an example of nozzles with divergent outlet portions.

In addition, the examiner is of the view that the language of claims 39 and 40 does not preclude avoiding means and avoiding portions that permit the mixing or combining of the drops further downstream within the heat exchanger or anywhere beyond the fuel supply plate because the appellants' specification discloses only that the drops do not mix along the surface of the fuel supply plate. (Answer at page 4).

We agree with the appellants that the avoiding means or avoiding portions as recited in claims 39 and 40 and as disclosed in the specification prevent mixing of fuel drops at the fuel distribution plate and beyond the fuel distribution plate. Appellants' specification describes the avoiding means or avoiding portions as chamfers 63 formed in the outlet portions of the holes 61. As disclosed in the specification, these chamfers 63 prevent the drops of liquid fuel flowing through adjacent holes from joining each other thereby facilitating a more uniform distribution of fuel to the whole area of the heat exchanger (specification at pages 13 to 14). As the specification discloses that the non joining of the drops facilitates the more uniform distribution of the fuel to the whole area of the heat exchanger, it is clear that the specification does not limit the non joining feature of the invention to the distribution plate.

In regard to the examiner's inherency argument, we note that a prior art reference need not expressly disclose each claimed element in order to anticipate the claimed invention. See Tyler Refrigeration v. Kysor Indus. Corp., 777 F.2d 687, 689, 227 USPQ 845, 846-847 (Fed. Cir. 1985). Rather, if a claimed element (or elements) is inherent in


a prior art reference, then that element (or elements) is disclosed for purposes of finding anticipation. See Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d at 631-33, 2 USPQ2d at 1052-54.

It is well settled that the burden of establishing a prima facie case of anticipation resides with the Patent and Trademark Office (PTO). See In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). When relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. See Continental Can Co. v. Monsanto co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (F3d. Cir. 1991); Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Patent App. & Int. 1990). Inherency, however, can not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. Id at 1269, 20 USPQ2s at 1749 (quoting In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981)).


After the PTO establishes a prima facie case of anticipation based on inherency, the burden shifts to the appellant to prove that the subject matter shown to be in the prior art does not possess the characteristics of the claimed invention. See In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); In re King, 801 F.2d 1324, 1327, 231 USPQ 136, 138 (Fed. Cir. 1986).

We agree with the appellants that Tsubouchi does not inherently describe avoiding means or portions. Firstly, there is no disclosure in the Tsubouchi reference that the nozzles include divergent cross sections at the outlet and the examiner's reference to the Johnson reference does not cure this deficiency. Johnson surely is not evidence that all nozzles have divergent cross sections at the outlets. As such, we are at a loss to understand what the description of divergent cross sections at the outlet portion of Johnson's nozzles has to do with the nozzles 41 to 45 described in Tsubouchi. Secondly, the nozzles 41 to 45 are described as atomizing nozzles and as such would produce a mist of fuel drops that would seem likely to mix, especially since the nozzles are described as oriented from a vertical plate (see Fig. 1). The nozzles 41 and 45 do not necessarily form avoiding means or portions as recited in claims 39 and 40. As such, the examiner's case of anticipation by inherency falls. Therefore, we will not sustain the examiner's rejection of claims 39 or 40 or claims 1, 7, 41 and 42 dependent thereon.

The decision of the examiner is reversed.

  
JOHN P. McQUADE  
Administrative Patent Judge

MURRIEL E. CRAWFORD  
Administrative Patent Judge

  
JENNIFER D. BAHR  
Administrative Patent Judge

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